

Annual Audit Plan
FY 2006



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ORGANIZATION

Created by the 1988 amendments to the Inspector General Act, the National Science Foundation (NSF) Office of Inspector General (OIG) reports directly to the National Science Board (NSB) and Congress. The OIG consists of two major organizational units, the Office of Investigations and the Office of Audits.

MISSION

We conduct independent and objective audits, investigations, and other reviews to support NSF in its mission by promoting the economy, efficiency, and effectiveness and safeguarding the integrity of NSF programs and operations.

Consistent with our statutory mandate and operational mission, we perform an oversight role and do not engage in program operating functions. The OIG recommends policies to promote economy, efficiency, and effectiveness in administering NSF programs and operations. It also aims to prevent and detect fraud, waste, and abuse; to improve the integrity of NSF programs and operations; and to investigate cases involving misconduct in science. Our work may be divided into two functional areas: investigations, which address allegations of serious wrongdoing; and audits and reviews, which provide information about how well systems function, and assess whether activities comply with financial and compliance standards and identify ways systems can be improved. In each area, we strive to focus on substantive matters, do our work fairly, and work cooperatively without compromising our independence.

Areas for collaboration across functional areas include involving auditors at early stages of investigations into alleged financial improprieties, creating teams of auditors and investigators to work on compliance issues, bringing together scientists and auditors for performance reviews, and establishing coordination among auditors, investigators and information technology staff to respond to alleged computer security breaches.

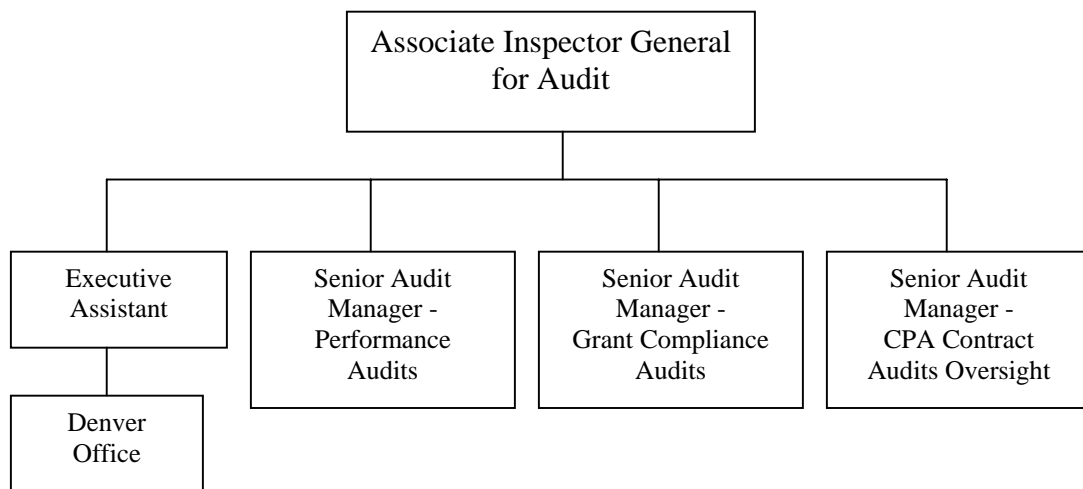
THE OFFICE OF AUDITS

The Office of Audits, headed by the Associate Inspector General for Audit, reviews agency operations as well as grants, contracts, and cooperative agreements funded by NSF.

Performance audits are reviews of specific NSF programs or operations, and provide NSF management with independent and objective assessments of whether desired program results and objectives are achieved efficiently, effectively and in accordance with applicable laws, regulations, policies or procedures. These audits are intended to assist NSF management in improving its controls and business practices and to identify and manage program risks at an early stage. We also audit NSF's financial statements, which includes evaluating the agency's controls over financial reporting and information system security.

We conduct grant audits of NSF awardees in order ascertain whether awardees have adequate internal controls to assure appropriate administration, accounting and monitoring of awards and whether funds spent on awards were used in compliance with NSF and federal requirements. Grant audits also determine whether costs claimed are allowable, reasonable, and properly allocated. Finally, grant audits seek to identify practices at NSF and awardee institutions that may be modified so that funds can be used more efficiently and effectively or for higher priority purposes.

Office of Audits



THE AUDIT PROCESS

The audit process begins when we initiate a planned or requested review. Maintaining NSF management involvement throughout the process ensures that the OIG adds value to NSF's operations. Our audit process is designed to maintain an open channel of communication between the OIG and management in order to keep them informed of the audit progress during each phase of the review. We conduct all of our audits in accordance with the Comptroller General's *Government Auditing Standards*, which are intended to ensure the integrity and competency of the audit process and the quality of the audit report. The steps in a typical audit follow.

Phases of a Typical Audit

- **Engagement Letter** - Notify awardee and/or NSF management of the OIG's intention to perform an audit.
- **Survey** - Obtain an overall understanding of the entity, program or operation under audit in order to clarify audit objectives and develop a work plan.
- **Field Work** - Collect and analyze information to identify audit findings. Review findings with auditee.
- **Exit Conference** - Inform awardee and/or NSF management of the results of the audit.
- **Reporting** - Communicate conclusions and recommendations to NSF and/or awardee management, the NSB and Congress.

Who Performs Our Audits?

OIG Staff

In conducting our audits, we draw upon a diverse staff with various educational and professional backgrounds. Our complement of professional staff includes auditors, attorneys, management analysts, scientists and investigators. We also rely upon staff located in our Denver Office for expert assistance in key functional areas and to provide us with increased economy and efficiency based on the geographic diversity this location provides.

Independent Public Accountants

We also supplement our in-house staff with independent public accounting firms under contract to our office. This insures that we have the expertise necessary to accomplish many varied and unique audit projects. We are currently relying on independent public accounting firms to perform the annual audit of NSF's financial

statements as required by the Chief Financial Officers Act, as well as audits of a number of awardee institutions for compliance with Federal and NSF award requirements.

A-133 Audits

Non-Federal entities that expend \$500,000 or more in a year in Federal awards are required, under the Single Audit Act of 1984, as amended, to have a single or program-specific audit conducted for that year. Office of Management and Budget (OMB) Circular A-133, *Audits of States, Local Governments and Non-Profit Organizations*, constitutes the guidance prescribed under the Act and sets forth standards for obtaining consistency and uniformity among Federal agencies for the audit of states, local governments, and non-profit organizations expending Federal awards. Reports prepared by state auditors or independent public accountants in accordance with this Circular are referred to as A-133 or Single Audits and address the institution's financial statements and compliance with award conditions. The purpose of these audits is to provide Federal agencies with information on how well government funds are being managed and spent. NSF relies on A-133 audit reports, when making awards and for ensuring accountability of its funds.

In addition to NSF's review of A-133 audit reports, the OIG queries the Federal Audit Clearinghouse database and reviews A-133 audit reports where NSF is designated the cognizant or oversight agency or where there are findings applicable to NSF awards. During these desk reviews we seek to identify trends in the nature of the independent auditor's findings that suggest systemic weaknesses in the awardee's award administration and compliance program and/or policy implications for NSF program management.

The Single Audit Act requires that OIGs conduct Quality Control Reviews (QCRs) of selected audits. Recent QCRs conducted by other federal agency OIGs have raised concerns with the quality of audits performed pursuant to the Act. To address these concerns, the government wide Single Audit Quality project commenced in FY 2003 to accurately assess the quality of Single Audits, and the NSF OIG is participating in this effort.

FY 2006 AUDIT PLAN DESCRIPTION

In keeping with our Strategic Plan, our audits and reviews are focused on issues of substantial concern and prospective importance to NSF and its goals. We therefore select and design projects based on assessments of the risk involved in the activity to be reviewed and the likelihood that an audit or review would lead to improvements.

Because of our responsibilities to Congress, NSB and NSF, the OIG's mission and goals differ from, but support the NSF mission of making awards in support of science and engineering research and education. We therefore focus our audits and reviews on the major phases of the award process: preaward, active award and close-out. We also invest in audits and reviews related to NSF's business management infrastructure in the areas of financial management, information technology, human capital, acquisition and physical plant security.

The OIG has a constructive role in helping NSF meet its goals. We believe our planned projects for the Fiscal Year (FY) 2006 Audit Plan address NSF's primary vulnerabilities and will assist NSF in achieving its mission and strategic goals.

This audit plan is a flexible, evolving document. Due to emerging priorities and issues, some planned assignments may be delayed while new reviews not listed may be initiated. With the recent hurricanes affecting the gulf coast of the United States, and the subsequent federal emergency relief efforts currently underway, there is a potential that the OIG will be involved in reviews of NSF funds supporting relief for affected institutions.

NSF Mission

NSF's authorizing legislation¹ established its mission, "to promote the progress of science; to advance the national health, prosperity and welfare; and to secure the national defense." Over the years, NSF has acquired additional responsibilities including fostering and supporting the development and use of computers and other scientific methods and technologies, providing Antarctic research, facilities and logistics support; and addressing issues of equal opportunity in science and engineering. NSF is the only federal agency dedicated to supporting fundamental research and education in all scientific and engineering disciplines, and accounts for 20 percent of federal support for basic research at colleges and universities.

NSF Award Types

NSF makes awards through a variety of mechanisms. Standard grants provide a specific level of support for a specified period of time with no statement of NSF intent to provide additional future support without a subsequent proposal. Continuing grants provide a specific level of support for an initial specified period of time, usually a year,

¹ The National Science Foundation Act of 1950, P.L. 81-507.

with a statement of intent to provide additional support, contingent on the availability of funds and satisfactory results. Cooperative agreements are used when the project requires substantial agency involvement during the project performance period due to the projects technical or management complexity. Contracts may be used for research awards or for support services for NSF.

The Award Cycle

The award cycle may be divided into three phases, preaward, active award and close-out. During the preaward phase of the award cycle, proposals are received electronically and assigned to program officers for review. The program officers assign the proposals for peer review by outside experts chosen by the program officers. The program officers receive the recommendations of the experts and make their own recommendations to award or decline a proposal based on the experts' opinions as well as available funding and the portfolio balance. Division Directors approve the choices and a grants officer in BFA for business, financial and policy implications conducts administrative preaward review.

During the active award phase of the cycle, payments to awardees are processed, and award management and oversight (including site visits) occur to ensure compliance with award terms and conditions. NSF assigns full responsibility to the awardee for the conduct of the project, and the awardee is expected to monitor the performance of the project for adherence to the terms of the award, and compliance with federal requirements. NSF can make site visits to review project accomplishments, management control systems, and the administration and management of the award, and to provide technical assistance. For cooperative agreements and multi year standard or continuing grants, annual reports are required from awardees for each 12-month period, and are part of the NSF decision to continue funding for continuing grants and cooperative agreements.

During the close-out phase, NSF determines that all applicable administrative actions and required work of the award have been completed. When final disbursements are made the award is closed and no additional disbursement can be reported. Final programmatic reports are required within 90 days of the expiration of an award.

SUMMARY OF PLANNED PROJECTS FOR FY 2006

1. Hurricanes Katrina and Rita

NSF joined other federal agencies in extending sincerest sympathies to people who were living and working in areas affected by Hurricanes Katrina and Rita. NSF has over 60 awardees in the states affected by these hurricanes. NSF pledged strong and continuing support for the research and education communities in the affected areas and established three major means of assistance. NSF will (1) assist in the transfer of awards for faculty and students who temporarily change institutions, including moving fellowship stipends, as appropriate, to new awardees; (2) consider requests for supplemental funding to existing awards to institutions hosting displaced faculty who could be added to an award at the host institution, and (3) accept proposals for Small Grants for Exploratory Research for quick response research on natural disasters.

Many federal agencies including NSF may receive funding from supplemental appropriations to be requested by the administration. The IG community has been asked by OMB to work proactively with agencies to help ensure that both agency specific efforts and supplemental appropriations achieve their intended results. The NSF OIG recognizes that NSF management has the primary responsibility to assure funds flow appropriately. However, the IG community is concerned about potential fraud, waste and abuse. Therefore, the NSF OIG will work with NSF management to prevent wrongdoing and to assure that NSF funds are used appropriately. For example, the NSF OIG may work with NSF to ensure that high-risk grants and contracts receive preaward reviews.

2. Preaward Phase

Preaward reviews are essential to reducing the government's risk when making awards. Ensuring that an awardee has both the programmatic and financial capability to successfully perform under the award reduces NSF's risk that funds may not be properly spent or that the award project may not achieve the intended results. Before awards are made, NSF's preaward process needs to assess (1) the intellectual merit and broader impacts of the applicant's proposal, (2) the quality of work plans to provide the framework for award performance and accountability, and (3) the applicant's capability to account for Federal and cost-shared funds.

Merit Review

NSF receives proposals electronically and assigns a program officer for review. NSF program officers in turn rely on outside experts chosen by the program officers from a pool of about 300,000 reviewers, to advise on the merit of proposals. Under the merit review process, the program officers receive the recommendations of the experts and make their own decisions to award or decline a proposal based on the experts' opinions as well as available funding and maintaining the balance of the portfolio. NSF Division Directors make the final decision to approve or decline proposals.

The goal of this merit review process, which NSF describes as a "critical component" of its preaward decision-making process, is "to ensure both that the highest quality projects are selected for funding and that the extramural community believes that funding decisions are fair." In merit review, proposals are evaluated using two criteria: intellectual merit and broader impacts. For each criterion there are considerations that may be used during the proposal's evaluation. For example, considerations for the intellectual merit criterion are how well qualified the proposer is to conduct the project, the quality of the proposer's prior work, how well conceived and organized is the project, and whether there will be sufficient access to resources.

The transparency and effectiveness of merit review are of importance to Congress and the NSF community. Recently, the House Committee on Appropriations² expressed support of NSF's merit-based peer review system, but requested that the NSB evaluate the merit review process, addressing the methodologies used to evaluate the quality of projects, the discretion exercised by NSF in choosing reviewers and projects, the composition of reviewer panels, and the "ability of the existing process to identify the most innovative proposals." Further, NSF's Advisory Committee for GPRA Performance Assessment, in its FY 2005 report, noted concerns expressed by NSF's Committees of Visitors regarding external reviewer "overuse" and decreasing "reviewer response" rates, emphasizing that increasing difficulties in recruiting reviewers could affect the quality of merit review.

² House Report 108-674, Department of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 2005

Business, Financial, and Policy Review

NSF's Grant General Conditions place full responsibility for the conduct of an NSF award and for adherence to the award terms and conditions on the awardee institution. Therefore, before making an award NSF should ensure that these institutions have adequate financial management and administrative systems. At NSF, the grants official is responsible for conducting a grants administrative preaward review for business, financial, and policy implications. Large awards may undergo additional review by the NSF Director's Review Board and/or the NSB.

If the grants officer has concerns with the prospective awardee's capability to account for its award(s), they refer their concerns to the NSF Cost Analysis and Audit Resolution (CAAR) Branch, which among other activities is responsible for performing preaward financial and business reviews. For example, awardees new to NSF are required to complete and provide to CAAR a "*Financial Management Systems Questionnaire*."³ CAAR reviews the completed questionnaire and discusses possible system deficiencies with the awardee. CAAR may also perform ad hoc reviews such as proposal budget, accounting system, or financial capability reviews of new and existing awardees at the request of other NSF offices. However, audits of NSF awards continue to identify problems with grantee financial management systems.

Further, NSF can use audit reports of grantees to identify problems with grantee financial management and program operations. At NSF, in coordination with OIG, CAAR resolves compliance, internal control, and questioned costs findings reported in audits of NSF awards. This includes audits issued by the NSF OIG and audits performed in accordance with OMB Circular A-133, in which NSF was designated the cognizant or oversight agency or where there were NSF-related findings. However, NSF is not the cognizant or oversight agency for the majority of its awardees. As such, NSF may not be aware of A-133 audits that include findings related to other Federal agency programs but that could also potentially affect NSF awards.

³ NSF 05-29, *Prospective New Awardee Guide*. May 2005.

In order to address risks related to merit review and business, financial and policy review, the following audits are planned for FY 2006.

<i>Program Area</i>	<i>Assignment</i>	<i>Focus</i>
Preaward		Financial/Administrative
	Preaward Audits of Various Institutions	Audits of institutions submitting proposals for facility operations and maintenance to assess the adequacy of institution accounting systems to manage federal funds.
Preaward		Performance
Budget, Finance and Award Management	Audit of NSF Bidding Process for Recompensation of an FFRDC Management Contract	Audit of the bidding process to recompete the management contract for one of NSF's FFRDCs.
Foundation Wide	Audit of an Aspect of NSF's Merit Review Process	Audit will assess the extent to which review panels obtain and use prior award results and accomplishments in award evaluation decisions.
Foundation Wide	Audit of NSF's Preaward Process	Audit will examine NSF's processes for ensuring that new awardees have adequate financial systems to manage federal awards in accordance with NSF and federal requirements.

* Represents on-going work

3. Active Award Phase

Once grants are awarded, it is important that NSF properly manage them. While recipients of NSF funds are responsible for overseeing programmatic and financial performance, NSF needs to oversee and monitor how well the recipients fulfill this responsibility. NSF must ensure that the grant funds lead to the results expected when the grant was made and are used for intended purposes in accordance with laws and regulations. As such, NSF needs to ensure programmatic results through performance monitoring and financial and administrative compliance through post-award monitoring. NSF also needs to ensure subrecipients' programmatic performance and financial and administrative compliance through oversight of prime recipients' monitoring of their subrecipients. The risks to NSF from the inadequate monitoring of program results during the active-award phase include suboptimal research results and missed opportunities to fund other research or educational opportunities that might have been more productive. The risks to the agency from the inadequate monitoring of financial and administrative compliance include erroneous payments, non-compliance with Federal and NSF grants requirements and undetected misuse of taxpayer funds.

Monitoring Programmatic Performance of Active Awards

NSF places the responsibility to review the programmatic progress of on-going awards on Program Officers; and to execute this function effectively; they need adequate time, written guidance, appropriate training, and effective monitoring tools. Because Program Officers' primary responsibility is proposal review and award selection, they have less time for management of on-going awards. Written guidance includes Chapter X in the *Proposal and Award Manual* and a brief statement in *A Guide for NSF Managers* that Program Officers are responsible for monitoring grant progress and ensuring compliance with applicable standards. However, neither of these resources provides specific guidance to Program Officers on how to oversee the programmatic performance of awardees. In addition, Program Officers currently receive no formal training on OMB Circulars, grant conditions, or responsibilities such as grantee performance monitoring. As a result, the extent and quality of programmatic oversight is ad hoc and dependent on the skill, experience, budget resources and time available to each Program Officer, many of whom are temporary. To monitor programmatic progress of awards lasting more than one year NSF relies in part on annual progress reports. However, a recent audit showed that over the five-year period from May 1999 to May 2004, more than 45,000 or 42 percent of required annual project reports had not been submitted.⁴ As a result of workload and workforce constraints, limited written guidance, high turnover, insufficient training, and inadequate enforcement of existing monitoring tools, NSF has less assurance that program goals are being accomplished.

⁴ Audit of Project Reporting for NSF Awards, December 13, 2004, OIG 05-2-006.

Monitoring Financial Status of Active Awards

During the six-month period ending March 31, 2005, there were \$44 million of questioned costs reported in 35 audit reports.⁵ These statistics underscore the need for financial and administrative oversight of on-going contracts and grants to reduce the risk of NSF's award portfolio. Although NSF has policies and procedures to oversee recipients' financial and administrative compliance, it lacks written procedures to monitor contractor financial compliance. For example, NSF's 2004 Financial Statement Audit identified as a reportable condition NSF's inadequate review of the public vouchers of the three contractors receiving advance payments. Although NSF is considering retaining a contract auditor to review the quarterly expenditure filings of NSF's largest contractor receiving advance payments, it does not currently have plans for similar audits of NSF's other two contractors that also receive advance payments.

The FY 2004 Financial Statement Audit also found deficiencies in NSF's post-award monitoring processes, a reportable condition that was also identified as a "long standing problem." In response, NSF has promulgated *Standard Operating Guidance 2005-2*, specifying baseline and advanced post-award monitoring responsibilities within the Office of Budget, Finance and Award Management (BFA).

The *SOG* describes two components of advanced post-award monitoring, the Award Monitoring and Business Assistance Program (AMBAP) and the Total Business System Reviews (TSBRs). Under the AMBAP, NSF has made on-site evaluations in the last two years at 60 institutions that are managing high-risk awards or have high-risk institutional characteristics. The TSBRs are designed to review the total business cycle of each of NSF's four FFRDCs over four years. The adequacy and effectiveness of the policies and procedures in *SOG 2005-2* to reduce portfolio risk are still being assessed. Therefore, risk remains for erroneous payments, non-compliance with NSF grants requirements and undetected misuse of taxpayer funds.

Monitoring Subrecipients

NSF awardees may further distribute funds to other organizations, known as subrecipients. Over the seven year period from 1996 to 2003 NSF funded \$4 billion in subawards or 20 percent of the total award funding for the 9,520 awards with subawards. Subrecipients, however, often lack experience and training to manage their subawards. Although it is the responsibility of the primary recipient to oversee its subawards and monitor at-risk subrecipients, NSF should also ensure its primary grantees are aware of the responsibility and have the systems in place to perform such oversight.

Continuing Risks

NSF monitoring of recipients' programmatic progress and financial reporting and their compliance with Federal and NSF requirements remains challenging due to time, budget, training, and other resource limitations. However, many of the risks of NSF's

⁵ Semiannual Report to the Congress, March 2005.

portfolio can be met within NSF's existing organizational structure and resources. Despite the use of "embedded" BFA staff in program offices, the monitoring process is essentially bifurcated: Program Officers are responsible for programmatic performance and BFA for financial and administrative oversight. For example, FCTRs received in BFA are not generally used by Program Officers in their monitoring efforts. More generally, an independent business analysis commissioned by the agency found that NSF needs to better integrate its programmatic and financial/administrative staff throughout the award lifecycle. Notwithstanding these constraints, NSF needs to monitor awardees' programmatic and financial and administrative capabilities and their compliance with applicable requirements, continue to integrate its financial and programmatic oversight, and ensure that primary recipients are effectively monitoring their subawards. Without adequate monitoring, NSF risks less than successful research performance, undetected fraud, and improper payments on its awards and subawards.

In order to address risks related to the programmatic and financial performance of awards, the following audits are planned for FY 2006.

<i>Program Area</i>	<i>Assignment</i>	<i>Focus</i>
Active Award		Financial/Administrative
Polar Programs	Audits of the Antarctic Logistics and Support Contractor*	Audits will determine whether the contractor has adequate systems to safeguard NSF funds, properly account for payments and expenditures, and comply with award requirements.
Polar Programs	Audits of the Arctic Logistics Contractor	Audits will determine whether the contractor has adequate systems to safeguard NSF funds, properly account for payments and expenditures, and comply with award requirements.
Polar Programs	Audit of Subcontractor to Antarctic Logistics and Support Contractor*	Audit is examining incurred costs and reviewing internal controls for the preparation of invoices to the prime contractor.
Foundation Wide	Community Colleges*	Audit will determine whether selected community colleges have adequate systems to safeguard NSF funds, properly account for payments and expenditures, and comply with award requirements. A summary report will be prepared to discuss issues common to community colleges and make recommendations for improvement.

NSF Wide	Federally Funded Research and Development Center (FFRDC) Post Retirement Benefits*	Audit will identify and assess the reasonableness of costs associated with post retirement benefits at FFRDCs.
Education and Human Resources	Howard University	Audit will determine whether the awardee has adequate systems to safeguard NSF funds, properly account for payments and expenditures, and comply with award requirements.
Foundation Wide	Labor Effort Reporting at Major Universities*	Audit will examine major recipients of NSF funding for compliance with requirements related to time and effort reporting.
Foundation Wide	Science and Technology Centers (STCs)*	STCs fund basic research and education activities, and encourage technology transfer and innovative approaches to interdisciplinary activities. Audits of two STCs will determine whether the awardees have adequate systems to safeguard NSF funds, properly account for payments and expenditures, and comply with award requirements, including cost sharing. A performance audit will assess program management of STCs to identify issues that may adversely affect the awardees' ability to comply with their research missions and NSF and federal requirements.
Foundation Wide	Summary of Indirect Costs (Non-Profit Institutions)*	Summary report of audits of eleven institutions that determined the allowability of indirect costs charged to NSF awards. Report will identify systemic issues of value to NSF and the awardee community.
Geosciences	University Corporation for Atmospheric Research (UCAR)*	Audit will review internal controls and indirect cost calculations, and follow up on recommendations from a prior OIG survey report.
Education and Human Resources	Urban Systemic Program/Urban Systemic Initiative*	Audit will determine whether selected Urban Systemic Initiative awardees have adequate systems to safeguard NSF funds,

		properly account for payments and expenditures, and comply with award requirements. A summary report will be prepared to discuss issues common to awardees in this program and make recommendations for improvement.
Foundation Wide	Various universities, non-profits and for profit entities	New and continuing audits to determine whether the awardees have adequate systems to safeguard NSF funds, properly account for payments and expenditures, and comply with award requirements. As applicable, audits will determine whether cost sharing and indirect cost rates are managed in compliance with Federal and NSF requirements.
Foundation Wide	OMB Circular A-133 Audit Program - Quality Control Reviews (QCRs)*	QCRs of audits of two institutions will determine the quality of the audits in accordance with Government Auditing Standards and OMB Circular A-133.

* Represents on-going work

4. Close-Out Administration

Assessing the programmatic and financial results of its research programs provides important feedback for NSF. High-level decision makers, such as the NSF Director, the NSB, OMB and Congress, need to know whether NSF funds were properly spent, and which programs are achieving their goals and objectives, in order to make budget allocation decisions.

Assessing Program Performance

Awardees are required to report to NSF on the accomplishments of their projects in final project reports. Special reports unique to a given award may also be required at close-out. NSF staff are responsible for reviewing these final reports, which may be important in deciding whether a particular awardee will continue to receive NSF funds. However, a recent OIG audit showed that out of 43,000 required final project reports, over 26,000 reports in the last five years were either not timely or not submitted at all; and in 74 cases Principal Investigator's institution received new NSF funding even though they had not submitted prior final reports.⁶ Therefore, it is unclear the extent to which NSF is evaluating the results of its research programs or is using this information to guide future investments.

NSF also relies on panels of experts, Committees of Visitors, to assess how NSF research programs contribute to NSF's missions and goals. While these Committees do assess research results, NSF needs to ensure the completeness and quality of these assessments and act on the reported conclusions and recommendations.

Assessing Financial Performance

Awardees are required to report on final disbursements during the close-out phase on a Federal Cash Transaction Report (FCTR). However, final disbursement reporting involves inherent risks that must be managed by NSF. For example, NSF awardees vary significantly in their financial management capabilities. Further, awardees report only summary rather than detailed expenditure information at the budget line item level. As such, NSF must have controls to ensure that the grant expenditures reported on the FCTRs are valid, accurate, and allowable. In response to the FY 2004 Financial Statement Audit, NSF promulgated post-award monitoring procedures including statistical sampling of reported expenditures on the FCTRs. The adequacy and effectiveness of the policies and procedures to reduce financial reporting risk are still being assessed. Therefore, the risk remains of erroneous payments, non-compliance with NSF grants requirements and undetected misuse of taxpayer funds.

Further, NSF must ensure that any unique reporting requirements such as those involving the disposition of Federally owned property and the finalization of maximum provisional indirect cost rates have been met. However, recent audits of indirect costs

⁶ OIG Report Number 05-2-006

showed the grantees did not file required annual indirect cost submissions and in some cases the NSF-approved indirect cost rates were substantially overstated. As a result, NSF has less assurance that final expenditure data is accurate.

NSF implements the requirements of OMB Circular A-50 for *Audit Followup* through its Standing Operating Guidance (2001-4) on *Audit Report Issuance and Resolution of Audit Findings Contained in Audits of NSF Awardees*. The OIG works with NSF staff to resolve internal control, compliance, and questioned costs findings contained in audits of NSF awards. The Guidance also includes standards for ensuring awardees implement corrective action plans that address audit findings, and working with OIG to develop monitoring and followup actions, and to institute safeguards to protect NSF interests if corrective action is not taken. However, ensuring that proposed corrective actions are effectively implemented remains challenging.

In order to address risks related to the assessment of program and financial performance of awards, the following audits are planned for FY 2006.

Close-out		Financial/Administrative
Foundation Wide	Contract Close-Out audits	Audits will determine whether contractors properly accounted for and can support costs charged to NSF awards and have complied with award requirements, including property accountability.
Close-out		Performance
Budget, Finance and Award Management	Audit of NSF's Audit Resolution Process	Audit will determine whether NSF's has adequate procedures and has taken effective corrective action on grantee audit report findings and recommendations.
Foundation Wide	Data Dissemination*	Audit will assess NSF's dissemination of the information it receives in annual, final, and other reports on the results of its research projects.
Foundation Wide	OMB Circular A-133 Audit Program - Desk Reviews	Auditors will perform desk reviews of A-133 audit reports received from the Federal Audit Clearinghouse.

* Represents on-going work

5. Infrastructure Excellence

NSF's award making and monitoring process requires a highly sophisticated infrastructure consisting of people, systems, information technology, and physical plant and equipment. For example, in order for NSF to conduct panel reviews of proposals it must have systems in place to allow panelists to travel to NSF, seamlessly enter the buildings and find their assigned room, and even connect their laptop to NSF's computer network. Ongoing award monitoring requires a highly trained staff, which must travel to awardee locations. All phases of the award process depend upon intricate financial accounting and reporting systems, which in turn depend upon an advanced and secure information technology substructure. NSF's infrastructure allows the agency to accomplish its mission. Consequently, this infrastructure must be protected, maintained, and improved.

For audit planning purposes, we have grouped NSF's infrastructure into five broad categories: (1) Financial Management, (2) Human Capital, (3) Physical Plant and Property, (4) Information Technology, and (5) Acquisition.

Financial Management

Improving financial management is a significant issue throughout the Federal Government. The Chief Financial Officers Act of 1990 (CFO Act), as amended, establishes the legal framework for improved Federal financial management. The CFO Act requires agencies to prepare financial statements and the OIG (or an independent public accounting firm selected by the OIG) to audit these statements.

The President's Management Agenda (PMA) includes *Improved Financial Performance* and *Budget and Performance Integration* as two of five government-wide initiatives. To improve financial performance, agencies have been asked to assess their risk and estimate the extent of improper payments in accordance with the Improper Payments Information Act, Public Law 107-300 (the Act). The Act defines improper payments as "any payment that should not have been made or that was made in the incorrect amount ... under statutory, contractual, administrative, or other legally applicable requirements." Improper payments can include those made by the Federal Government, its contractors, and grant recipients administering Federal programs. The Act requires that Federal agencies provide to OMB a statistically valid estimate of improper payments for all susceptible programs and activities. NSF has implemented a plan to conduct site visits at a number of high-risk awardee institutions and to statistically sample grantee expenditures reported on the FCTR's. Implementing the Act, however, has proven to be very complicated and it is an issue that is still being discussed within the Federal community.

Additionally, agencies must ensure that their financial accounting systems provide accurate, timely information to support management decision-making, including

information to assess the cost and performance of government programs and activities. To make the government more results oriented, Congress enacted the Government Performance and Results Act (GPRA) in 1993. But the authors of the PMA observed that progress toward the use of performance information for program management has not been encouraging. Therefore, to focus attention on program performance, the PMA requires the integration of performance reviews of Federal programs with budget decisions on agency funding. OMB has introduced the Program Assessment Rating Tool (PART) to evaluate program performance, identify program strengths and weaknesses, and provide program effectiveness ratings to assist in the budget decision-making process. The expected results are improved accountability through audited financial statements, fewer improper payments, and more timely and useful performance information to inform decision-making on the allocation of public funds.

Since FY 2002, audits of NSF's financial statements have identified a reportable condition related to the agency's post-award monitoring of grantee institutions for compliance with the financial terms and conditions of NSF's awards. Additionally, in FY 2004, the audit identified another reportable condition related to NSF's contract monitoring. An effective post-award monitoring program for all awards of all sizes – grants, cooperative agreements, and contracts – is necessary in order to accurately report expenditures on NSF's financial statements, ensure that the awardees are expending their grant funds in accordance with their award agreements and federal regulations, and to ensure that adequate progress is being made toward achieving award program goals, objectives and targets. In response, NSF has promulgated *Standard Operating Guidance 2005-2*, specifying baseline and advanced post-award monitoring responsibilities within NSF. However, the guidance does not address the portion of NSF's portfolio devoted to large facility projects. NSF anticipates that it will be monitoring these awards under a separate policy that is being developed in response to a December 2000 audit by our office. However, this guidance for large facility projects is yet unfinished.

In addition to continuing to respond to financial statements audit recommendations relating to cost accounting and reporting deficiencies, NSF is now tasked with complying with OMB Circular A-123, *Management's Responsibility for Internal Control*, and its revised requirements for assessing and documenting internal controls over financial reporting, testing those internal controls as part of the assessment process, and preparing a separate assurance statement from management as part of the annual *Federal Managers Financial Integrity Act*. As a result of these enhanced requirements, our office will pay close attention to NSF's implementation of the new A-123 standards as well as continue to perform our statutory role in the annual audit of NSF's financial statements.

Human Capital

Since FY 2001, NSF and the OIG have identified workforce planning and training as one of NSF's top management challenges. According to NSF's *Human Capital Management Plan* (December 2003), 19 percent of the Foundation's overall workforce is currently eligible for voluntary retirement, and 42 percent will be eligible by FY 2007,

leaving NSF vulnerable to a “knowledge flight.” Adding to this challenge is the fact that almost half of NSF’s staff of 700 science and engineering personnel is temporary. NSF continues to experience mounting pressure on its staff due to a workload that is increasing in size and complexity.

NSF is making progress in addressing its human capital challenges, as reflected in its “yellow” status for human capital management on the President’s Executive Branch Management Scorecard of March 31, 2005. Nevertheless, to attain green Scorecard status and successfully meet its new strategic goal of developing a diverse, capable, motivated staff that operates with efficiency and integrity, more remains to be done.

In particular, in its *Human Capital Management Plan*, NSF has identified eight human capital goals, as well as action strategies to accomplish those goals. For example, one goal of the Plan is to institute a transparent, agency-wide practice of workforce planning that enables NSF leaders to make informed and timely decisions about the type, number and required competencies of NSF positions. NSF has identified seven actions to implement this goal, including developing a more flexible position management system and identifying promising workforce planning practices in the public, private, and academic sectors. These particular strategies, like many of the Plan’s goals and action strategies, depend on the results of the \$12.8 million, multi-year independent business analysis commissioned by NSF and currently in process. Under the business analysis, NSF is analyzing its human capital requirements in both the short and long-term, to ensure that it optimally recruits, selects, evaluates, develops, motivates, and retains a workforce aligned with the mission of the Foundation. NSF expects to regularly assess its progress toward meeting the goals through a “Human Capital Accountability System,” that will consider business analysis outcomes and shifts in organizational priorities.

Also, important human capital strategy employed by NSF to accomplish its mission is the use of visiting personnel and other temporary employees. Visiting personnel allow NSF to refresh and supplement its permanent professional staff with individuals borrowed from the nation’s research and education institutions, organizations, and industry. However, this strategy presents a challenge to NSF in that the inherent increased employee turnover also increases workload to recruit, hire, process, and train these personnel. In FY 2004, we conducted an *Audit of Costs Associated with Visiting Personnel*.⁷ The audit report provided NSF with information about the additional costs of visiting personnel and included several recommendations to help NSF improve its human capital management process, and ensure transparency and accountability in the process. In FY 2006, we will continue to work with NSF as it implements the recommendations.

Finally, NSF continues to face a significant risk of not having enough staff to adequately carry out its various business functions. For example, in FY 2004, the number of proposals NSF received increased to 43,851, up 49 percent since FY 2000. However, during this time period the number of NSF program officers *declined* from 396 to 385. As a result, the average number of proposals each program officer handles has increased from 74 to 113. But a program officer’s duties involve much more than

⁷ Audit of Costs Associated with Visiting Personnel, July 23, 2004, OIG 04-2-006.

processing proposals. Once awards are made, program officers are key parts of ongoing award administration. At any one time, NSF has over 30,000 active awards that program officers are expected to monitor. The award administration process also involves grant officers who, given that NSF relies on its grantees to manage, oversee, and execute grants in accordance with Federal regulations, must also be available to awardees for outreach, education, and technical assistance. As a result of workload increases and requirements and high turnover, NSF has less assurance that goals are being accomplished.

Physical Plant and Property

Perhaps the most visible facets of NSF's infrastructure are its buildings and physical property. Thousands of employees, contractors, and visitors enter NSF's buildings each day and use the physical property contained therein. NSF must ensure that its physical environment is not only adequate to support its needs, but also safe and secure. In addition, NSF must prevent against unauthorized acquisition, use, or disposition of its physical assets.

Physical security for Federal office buildings has been a government wide concern since the 1995 bombing of the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma, but has continued through the events of September 11, 2001, and into our current awareness due to the recent gulf-coast hurricanes. In June 1995, DOJ issued a report entitled *Vulnerability Assessment of Federal Facilities*, which designated security levels I through V into which federal office buildings could be categorized and identified minimum-security standards for each of the five security levels. These standards covered perimeter, entry and interior security, and security planning. Fifty-two minimum standards were established with level I having 18 minimum standards and level V having 39 minimum standards. Examples of minimum standards include lighting with emergency power backup for all buildings (perimeter security); intrusion detection systems for building levels III through V (entry security); visitor control systems for building levels II through V (interior security); and standard armed and unarmed guard qualifications/training requirements in all buildings (security planning). NSF's primary building in Arlington, VA has been assessed as a level IV.

In May 1998, Presidential Decision Directive 63 was issued with the intent to eliminate any significant vulnerability to both physical and cyber attacks on the Federal government's critical infrastructure. This Directive makes every Federal department and agency responsible for protecting its own critical physical infrastructure. However, because of the vast differences in types of Federal facilities and the variety of risks associated with each of them, there is no single approach to security that will work ideally for all buildings. For example, the General Services Administration has adopted a risk management approach to assessing the security of its buildings, which the Government Accountability Office believes is fundamental to determining security priorities and implementing appropriate solutions.

Information Technology

According to NSF's FY 2006 budget request, "adequate funding for...Information Technology is critical to the efficient operations of the agency." There are many risks associated NSF's IT activities and plans. For example, the FY 2004 FISMA evaluation found that NSF has an established information security program and has been proactive in reviewing security controls and identifying areas to strengthen its program, weaknesses remain such as the need to strengthen the information security program for U.S. Antarctic Program. Without corrective action, this and other security weaknesses could result in unauthorized access to and modification of financial, programmatic, and other sensitive information; loss of assets; health and safety risks; and disruption of critical operations and the ensuing costs associated with business downtime and recovery.

Notably, NSF was one of two Federal agencies to receive an "A" on the most recent Federal Computer Security Score Card issued by the Government Reform Subcommittee on Technology, Information Policy, Intergovernmental Relations and the Census. Notwithstanding this noteworthy achievement, NSF must continue to have a comprehensive and effective IT security program both to meet Federal requirements and to mitigate risks that threaten the successful operation and development of its IT systems. IT systems and the information they contain must be protected from unauthorized access, use, disclosure, disruption, modification, and destruction.

Acquisition

Acquisition continues to be a significant process supporting all of NSF's functions, as well as its overall mission. In FY 2004, NSF acquired approximately \$338 million in goods and services through outside vendors, including an estimated \$192 million paid through advance contracts. For example, NSF purchases IT services and software, contracts for statistical services in preparing specialized reports, and acquires basic business needs such as desks, computers, and office supplies. NSF also enters into large contracts that are more research related. However, this portion of our audit plan focuses on the acquisition of goods and services used to support NSF itself.

While the dollar amount of procurement contracts at NSF may not be as high as other Federal agencies, Federal and NSF acquisitions involve inherent risks. The use of credit cards decentralizes an agency's purchasing function, and gives purchasing authority to a greater number of staff. Decentralization also increases the risks of unauthorized purchases, excessive payments, or sub-optimal performance. In a given year, NSF cardholders make thousands of purchases worth millions of dollars with government purchase cards. Additionally, as more purchases are made electronically, the risks increase; and NSF must address issues such as security, access, and authentication to ensure the integrity of the contracting process.

In order to address risks related to infrastructure, the following financial and performance audits are planned for FY 2006.

⁸ *Audit of Costs Associated with Visiting Personnel*, July 23, 2004, OIG 04-2-006.

<i>Program Area</i>	<i>Assignment</i>	<i>Focus</i>
Infrastructure Excellence		Financial/Administrative
Foundation Wide	Oversight of FY 2005 CFO Audit	Oversight of the audit of NSF's agency-wide financial statements, which will be performed by an independent public accounting firm under contract to the OIG. The audit is mandated under the Chief Financial Officers Act of 1990.
Foundation Wide	FY 2005 FISMA Review and FISCAM Audit	Annual evaluation of NSF's information system security program and practices as required by the Federal Information Security Management Act of 2002 (FISMA). Evaluation performed as part of the FY 2005 CFO Audit in accordance with the Government Accountability Office's Federal Information Systems Control Audit Manual (FISCAM).
Government Wide	Single Audit Quality Project*	Auditors will participate in a government-wide project to assess the quality of Single Audits and to provide a baseline for measuring Single Audit quality in the future. Mandated under the NSF Authorization Act of 2002.
Infrastructure Excellence		Performance
Foundation Wide	Audit of the Government in the Sunshine Act at NSF	The National Science Board holds meetings approximately five times per year, and these are subject to the openness requirements of the Government in the Sunshine Act. Audit will assess the Board's compliance with the Act.
Budget, Finance and Award Management	Audit of NSF's Administrative and Overhead Costs	The conference report for the FY 2005 consolidated appropriations for NSF requests the NSF OIG review the portion of NSF's budget devoted to administrative and other overhead expenses and how they compare to other large research agencies.

Foundation Wide	Study of NSF's Business Analysis and Human Capital Planning	In FY 2002, NSF contracted for a multi-year business analysis of its operations and the development of a human capital management plan. The analysis is expected to result in recommendations to improve and redesign its core processes (resource allocation; merit review; award management and oversight; knowledge management; and performance assessment and accountability). Given the extensive scope, cost, and duration of the contract, the OIG will follow the progress of the contract and report on its status as appropriate.
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* Represents on-going work